

ABSTRACT OF THE DISCLOSURE

Disclosed are antibodies that block the binding of fibronectin protein to fibronectin. Also disclosed are site specifically-mutated and truncated peptide epitopes derived from the *fnbA* and *fnbB* genes of *Staphylococcus aureus*, the *fnbA* and *fnbB* genes of *Streptococcus dysgalactiae*, and the *sfb* gene of *Streptococcus pyogenes*, and nucleic acid segments encoding these peptides and epitopes. The anti-(fibronectin binding site) antibodies, peptides and epitopes that give rise to antibodies that block the binding of fibronectin binding proteins to fibronectin, and DNA segments encoding these proteins and are of use in various screening, diagnostic and therapeutic applications including active and passive immunization and methods for the prevention of streptococcal and staphylococcal colonization in animals or humans. These DNA segments and the peptides derived therefrom are proposed to be of use directly in the preparation of vaccines and also for use as carrier proteins in vaccine formulations.